

REMARKS

This amendment responds to the Final Office Action mailed January 12, 2007. In the office action the Examiner rejected claims 1-3, 5-10, 21-23 and 25-32 under 35 U.S.C. 102(e) as anticipated by Mandelman et al. (US 6,762,447).

After entry of this amendment, the pending claims are: claims 1-3, 5-10, 21-23, and 25-32.

CLAIM AMENDMENTS

With this amendment, the applicant has amended claims 1 and 21 to recite that a metallization is disposed on the planar surface of the silicon substrate and the upper surface of the polysilicon fill. The applicant has amended claim 2 to recite that the upper surface of the polysilicon fill is approximately level with or above the planar surface of the silicon substrate. These amendments are supported by at least page 12, line 22 to page 13, line 22 of the specification in connection with Figures 2D through 2F, and from page 14, line 7 to page 15, line 5 of the specification in connection with Figure 3.

No new matter is added.

CLAIM REJECTIONS

Claim 1 recites an electronic silicon device comprising:

a silicon substrate comprising a planar surface;
a trench disposed in said planar surface of said silicon substrate,
said trench comprising a wall and a bottom;
a silicon dioxide layer disposed on the bottom of said trench and
also on a first portion of said wall, said layer being terminated at a
distance D below said planar surface of said silicon device;
a polysilicon fill disposed on the surface of said silicon dioxide
layer and on a second portion of said wall, and

*a metallization disposed on the planar surface of said silicon
substrate and an upper surface of said polysilicon fill.* (Emphasis added)

Claim 21 is amended in a substantially similar manner.

But Mandelman et al. does not teach or even suggest a metallization disposed on the planar surface of the silicon substrate and an upper surface of said polysilicon fill.

Actually, all the figures of Mandelman et al. show that the recess right above the upper surface of the polysilicon fill 14 in the deep trench 12 is “filled, advantageously with silicon dioxide 16” (col. 7, line 12), which acts as a dielectric capping layer to protect the data bit stored in the polysilicon fill 14. In contrast to the dielectric capping layer, however, a metallization disposed on the polysilicon fill 14 would completely defeat the function of the memory cell taught by Mandelman et al.

Thus, claims 1-3, 5-10, 21-23, and 25-32 are not anticipated by Mandelman et al.

In light of the above amendments and remarks, the Applicant respectfully requests that the Examiner reconsider this application with a view towards allowance. The Examiner is invited to call the undersigned attorney at (650) 843-4000, if a telephone call could help resolve any remaining items.

Respectfully submitted,

Date: March 7, 2007 / Gary S. Williams / 31,066
Gary S. Williams (Reg. No.)
MORGAN, LEWIS & BOCKIUS LLP
2 Palo Alto Square
3000 El Camino Real, Suite 700
Palo Alto, CA 94306
(650) 843-4000